

CLAIMS

1-58. (Cancelled)

59. (Currently Amended) ~~A laser having an improved iodine injection system, the laser~~ comprising:

a gas generator for producing a first gas;

a laser cavity that is ~~where lasing occurs, the laser cavity~~ in fluid communication with the gas generator;

a symmetric two-dimensional Minimum Length Nozzle (MLN) between the gas generator and the ~~laser~~ cavity, the MLN having:

a throat located at a first end of the MLN, the throat being in fluid communication with the gas generator and receiving a flow of the first gas from the gas generator;

a curved sonic line defining the transonic boundary of the flow of the first gas within the MLN; and

an exit plane located at a second end of the MLN, the exit plane forming the boundary between the MLN and the ~~laser~~ cavity such that a flow of a second gas is output from the MLN and input into the ~~laser~~ cavity, and the flow of the second gas is generally uniform and generally supersonic; and

at least one injection strut located within the MLN and downstream of the throat, the strut injects iodine into the flow of the first gas.

60. (Previously Presented) The iodine injection system according to claim 59 wherein the nozzle has a kernel region and the strut is located near the downstream end of the kernel region.

61. (Previously Presented) The iodine injection system of claim 61 wherein the downstream edge of the kernel region is located between 10% to 50% of the distance from the throat and the exit plane.

62. (Previously Presented) The iodine injection system of claim 1 wherein the strut is located within 20% to 90% of the distance between the nozzle throat and the exit plane.

63. (Previously Presented) The iodine injection system according to claim 59 wherein a carrier gas is injected with the iodine.

64. (Previously Presented) The iodine injection system according to claim 63 wherein the carrier gas is helium.

65. (Previously Presented) The iodine injection system according to claim 63 wherein the carrier gas is nitrogen.

66. (Previously Presented) The iodine injection system according to claim 63 wherein there are at least two struts, the second strut being located further downstream in the nozzle than the first.

67. (Previously Presented) The iodine injection system according to claim 59 wherein there are at least two struts that are staggered between the nozzle throat and the exit plane.

68. (Previously Presented) The iodine injection system according to claim 59 wherein the strut further comprises a heating element.